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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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FLESHNER & KIM
P O BOX 221200
CHANTILLY, VA 201531200

EXAMINER

WON, YOUNG N

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/395,507

Applicant(s)

MILLER ET AL.

Examiner

Young N Won

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 and 8 have been amended and all claims re-examined.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Page 10 line 11 discusses GDMO compiler 22. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 1 and 8 are objected to because of the following informalities: The amendment states "without interrupting and operation of the network management system", but the argument argues, "without interrupting an operation of the network management system". For the purpose of proceeding with the action, the examiner has taken the position of accepting the latter to be true.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5-11, and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley et al. (US Pat No.5815415) in view of Lin et al. (US Pat No.6243457 B1).

As per claim 1, Bentley teaches of a network management system (see col.5 line 49 and col.47 line 47), comprising: a management system kernel (see Fig.1 #12; col.7, lines 55-60; and col.8 lines 8-28) that provides management systems with a run time environment (see col.7 lines 48-52); and a managed object generation environment that provides a development environment for managing applications (see Fig.2 and col.15, lines 56-61), wherein the management system kernel can at least one of dynamically add and dynamically modify managed object (MO) information based upon an external meta file (EMM) (see col.16 lines 52-55) from the managed object generation environment (see col.5, line 65 to col.6, line 2; col.8 lines 4-7; and col.40, lines 51-56). Bentley does not explicitly teach that the adding and modifying of managed object occurs without interrupting an operation of the network management system. Lin teaches of adding and modifying of managed object occurs without interrupting an

operation of the network management system (see col.3, lines 20-25 & lines 41-50). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Lin within the system of Bentley by implementing modifications of the managed object information without interrupting an operation of the network management system because this would save time by eliminating the need for re-initialization or rebooting of all devices.

As per claim 2, Bentley further teaches wherein the management system kernel comprises: a communication module that provides communication with a network manager (see Fig.5 #56: "interface"); a managed object framework (see Fig.2 #14) that maintains information on MO classes; a kernel (see Fig.2 #12) that stores a dynamic class loading module (see Fig.2 #23) and initializes the network management system (see col.7 lines 43-46), wherein said kernel establishes an association with other management systems through the communication module (see col.7 lines 43-46), performs management operations on MOs (see Fig.2 #30 and col.8 lines 18-20), adds the MO information in the managed object framework using the dynamic class loading module (see col.8 lines 4-7) and modifies the MO information in the managed object framework using the dynamic class loading module (see col.10 line 12); and a containment tree (see Fig.25 & Fig.26, and see col.27 line 61: "parse tree") that organizes MO instances according to the information on MO classes and allows access to the MO instances when a management operation is performed in the network managed system (col.28 lines 24-25).

As per claim 3, Bentley further teaches wherein managed object framework maintains information on MO classes (see col.10 lines 35-40) by registering MO class codes on a class information table (see col.10 #84, col.16 line 36: "dispatch table", and col.16 lines 52-55).

As per claims 5 and 6, Bentley further teaches wherein the managed object generation environment comprises: a MO compiler that compiles a MO script to generate the EMM file and MO class codes (see col.4 lines 33-41); and a dynamic library storing the MO class codes (see col.12 lines 17-31).

As per claim 6, Bentley further teaches wherein the EMM file includes MO class definition described in the MO script, and identifies a location and name in the dynamic library of a corresponding MO class (see col.16 lines 52-55).

As per claim 7, Bentley further teaches wherein the MO class codes are compiled and stored in the dynamic library in a form of a dynamic link library (see col.32 lines 47-50).

As per claim 8, Bentley teaches of a network management method (see col.4 lines 66-67) comprising: (a) storing a dynamic class loading routine in a management system kernel (see Fig.1 #18; col.7 lines 33-39; col.21, lines 32-33; and col.41, lines 55-58); (b) initializing a managed system by constructing a managed object framework of the management system kernel that contains information of managed object (MO) classes (see col.8 lines 60-62 and col.17 lines 64-67 to col.18 lines 1-6); (c) creating MO instances and registering the MO instances in a containment tree of the management system kernel according to the information of MO classes (see col.5 lines 32-34); (d)

checking whether a dynamic class loading flag is on when receiving a management operation request from a management system (see col.16 lines 5-6 and col.21 lines 25-29); and (e) updating MO information on the management system kernel by waiting for all threads to complete execution, loading a dynamic library to the managed object framework utilizing the dynamic class loading routine when the dynamic class loading flag is on, and resetting the dynamic class loading flag to off (see col.30 lines 48-54 and col.40 lines 20-32). Bentley does not explicitly teach that the adding and modifying of managed object occurs without interrupting an operation of the network management system. Lin teaches of adding and modifying of managed object occurs without interrupting an operation of the network management system (see col.3, lines 20-25 & lines 41-50). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Lin within the system of Bentley by implementing modifications of the managed object information without interrupting an operation of the network management system because this would save time by eliminating the need for re-initialization or rebooting of all devices.

As per claim 9, Bentley further teaches (f) performing the requested management operation and sending a management operation result to the management system requesting the management operation when the dynamic class loading flag is not on (see col.8 lines 63-67 and col.29 lines 66-67 to col.30 lines 1-3).

As per claim 10, Bentley further teaches wherein dynamic class loading routine of (e) comprises: opening an EMM file (see col.16 lines 47-55) stored outside (see col.1

lines 20-21) the management system kernel; and loading the dynamic library indicated by the EMM file (see col.8 lines 4-7 and col.39 lines 16-17).

As per claim 11, Bentley further teaches further comprising storing information about the management system requesting a management operation (see Abstract).

As per claim 13, Bentley further teaches wherein the dynamic class loading flag is set on when the management system requesting a management operation invokes the dynamic class loading function to perform one of adding and modifying MO information in the management system kernel (see col.29 lines 20-23).

As per claim 14, Bentley further teaches wherein the management system requesting the management operation invokes the dynamic class loading function by sending a control signal (see Fig.8 #76 and col.16 lines 23-30).

As per claim 15, Bentley teaches a network management method, comprising: storing a dynamic class loading routine in a management system kernel of the managed system (see Fig.1 #18; col.7 lines 33-39; col.21, lines 32-33; and col.41, lines 55-58); updating the management system kernel by modifying managed object (MO) information in the management system kernel by utilizing the dynamic class loading routine (see col.40 lines 20-32 and col.48 lines 23-38). Bentley does not explicitly teach that the updating of managed object occurs while the managed system is operating. Lin teaches that the updating of managed object occurs while the managed system is operating (see col.3, lines 20-25 & lines 41-50). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Lin within the system of Bentley by updating managed objects while the managed

system is operating because this would save time by eliminating the need for re-initialization or rebooting of all devices.

As per claim 16, Bentley further teaches of generating the MO information to be modified (see col.12 lines 45-50) and generating an external (see col.1 lines 20-21) Meta file (EMM) file (see col.16 lines 47-55) in a managed object generation environment of the managed system (see col.15 lines 56-58), wherein the dynamic class loading routine opens the EMM file to modify the MO information in the management system kernel (see col.43 lines 44-47).

As per claim 17, Bentley further teaches wherein the MO information to be modified is stored in the managed object generation environment in the form of a dynamic link library (see col.32 lines 47-50).

As per claim 18, Bentley further teaches wherein the EMM indicates an address of a dynamic link library corresponding to the MO information to be modified, and wherein the MO information is modified in the management system kernel according to said address (see col.7 lines 66-67 to col.8 line 1).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley et al. (US Pat No.5815415) in view of admitted prior art within the disclosure.

As per claim 4, Bentley further teaches of an agents (see col.9 lines 37 & 53-54), but he does not teach wherein the kernel creates at least one dedicated agent to perform subsequent management operations from management systems with which an

association has been established. Admitted prior art teaches wherein the kernel creates at least one dedicated agent to perform subsequent management operations from management systems with which an association has been established (see Page 2 lines 5-6 & 10-18). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of the prior art within the system of Bentley, by implementing an agent to perform management operation with an associated management system, because this would allow the system to scope and filter the containment tree in response to management requests rather than compiling a tree with each project request, thereby increasing speed and functionality.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley et al. (US Pat No.5815415) in view of admitted prior art within the disclosure and Sheard et al. (US Pat No.6208345).

As per claim 12, Bentley does not teach checking whether an additional thread can be created; creating a dedicated agent to take charge of subsequent management operations from the management system requesting an association if an additional thread can be created; and executing the dedicated agent thread and delivering association and management operation information to the dedicated agent to be utilized in interacting with the management system. Admitted prior art and Sheard, teaches about checking whether an additional thread can be created; creating a dedicated agent to take charge of subsequent management operations from the management system

requesting an association if an additional thread can be created; and executing the dedicated agent thread and delivering association and management operation information to the dedicated agent to be utilized in interacting with the management system (see col.15 lines 47-50 and col.29 lines 12-16). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of the prior art and Sheard within the system of Bentley, by implementing an agent to perform management operation and creating additional threads with an associated management system, because of claim 4 rejection (above) and because threads are implemented to prioritize incoming requests (see col.14 lines 26-28) thereby making the system more efficient and productive.

Response to Remarks

7. In regards to the amended claims 1, 8, and 15, new art has been applied. Also, in response to the arguments, further reference locations have been recited to clarify the ambiguities

8. In regards to claim 4 and claim 12 arguments, clearly the specification teaches of prior art reciting an agent performing management operations.

Conclusion

It is the duty of the examiner to protect the interest of the public to view the claims as broadly as it has been recited. The applicant is reminded that he/she is his/her own lexicographer. Also, the examiner cannot view the claims beyond the scope of the claim itself unless defined by the specification.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Young N Won whose telephone number is 703-605-4241. The examiner can normally be reached on M-Th: 8AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 703-305-9648. The fax phone numbers

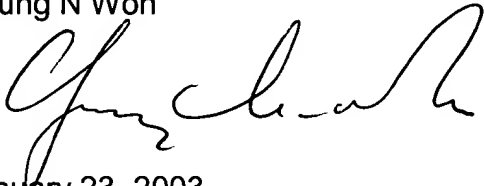
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for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Young N Won



January 23, 2003


AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100